

CLAIMS

1. Process for manufacturing a laminate, which at least comprises the application of a layer of polyamide to a substrate, characterized in that as polyamide
 5 mainly branched polyamide is used that is at least composed of units derived from:
- a. AB monomers, which are understood to mean a monomer that has both a carboxylic acid group (A) and an amine group (B),
 - b. at least one compound I, being a carboxylic acid (A_v) with functionality $v \geq$
 10 2 or an amine (B_w) with functionality $w \geq 2$,
 - c. at least one compound II, being a carboxylic acid (A_v) with functionality $v \geq$
 3 or an amine (B_w) with functionality $w \geq 3$, with compound II being a carboxylic acid if compound I is an amine or with compound II being an amine if compound I is a carboxylic acid, wherein the quantities of units,
 15 derived from all the carboxylic acids and amines in the polyamide, satisfy formula 1

$$P < 1 / [(F_A - 1) \cdot (F_B - 1)] \quad (1)$$

20 in which:

$$P = [\Sigma(n_i \cdot f_i)]_X / [\Sigma(n_i \cdot f_i)]_Y \quad (2)$$

in which $P \leq 1$ and either $X = A$ and $Y = B$, or $X = B$ and $Y = A$ and

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$$F = \Sigma (n_i \cdot f_i^2) / \Sigma (n_i \cdot f_i) \quad (3)$$

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for respectively all carboxylic acids (F_A) and amines (F_B), wherein f_i is the functionality of a carboxylic acid (v_i) or amine (w_i), n_i is the number of moles of a carboxylic acid or amine and the summation is carried out over all units derived from carboxylic acids and amines in the polyamide.

- 2. Process according to claim 1, in which the layer of polyamide is applied by extrusion coating.
- 3. Process according to claim 1 or 2, in which the substrate, is a metal or is

paper or paperboard, optionally coated with a layer of a metal foil.

4. Laminate comprising a substrate and a layer consisting mainly of a branched polyamide that is at least composed of units derived from:

- a. AB monomers, which are understood to mean a monomer that has both a carboxylic acid group (A) and an amine group (B),
- b. at least one compound I, being a carboxylic acid (A_v) with functionality $v \geq 2$ or an amine (B_w) with functionality $w \geq 2$,
- c. at least one compound II, being a carboxylic acid (A_v) with functionality $v \geq 3$ or an amine (B_w) with functionality $w \geq 3$, with compound II being a carboxylic acid if compound I is an amine or with compound II being an amine if compound I is a carboxylic acid, wherein the quantities of units, derived from all the carboxylic acids and amines in the polyamide, satisfy formula 1

$$P < 1 / [(F_A - 1) \cdot (F_B - 1)] \quad (1)$$

in which:

$$P = [\sum (n_i \cdot f_i)]_X / [\sum (n_i \cdot f_i)]_Y \quad (2)$$

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in which $P \leq 1$ and either $X = A$ and $Y = B$, or $X = B$ and $Y = A$ and

$$F = \sum (n_i \cdot f_i^2) / \sum (n_i \cdot f_i) \quad (3)$$

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for respectively all carboxylic acids (F_A) and amines (F_B), wherein f_i is the functionality of a carboxylic acid (v_i) or amine (w_i), n_i is the number of moles of a carboxylic acid or amine and the summation is carried out over all units derived from carboxylic acids and amines in the polyamide.

5. Use of the laminate according to claim 4 for manufacturing a packaging for foodstuffs.
6. Packaging for foodstuffs, comprising the laminate according to claim 4.

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